



ARSAT-1 MISSION



ARSAT -1 is the first satellite belonging to the Argentine Geostationary Telecommunications Satellite System , a program which implies designing, building, putting into orbit and operating our own satellites in order to increase the capacity of our country regarding telecommunications with the view to delivering top quality connectivity throughout the country.

ARSAT-1, which took over one million three hundred thousand hours of Argentine labor to make, is to transport radiofrequency signals on Ku band for telecommunications for TV in homes, access to Internet for reception on VSAT antennas and data and telephone services on IP to Argentina and bordering countries.

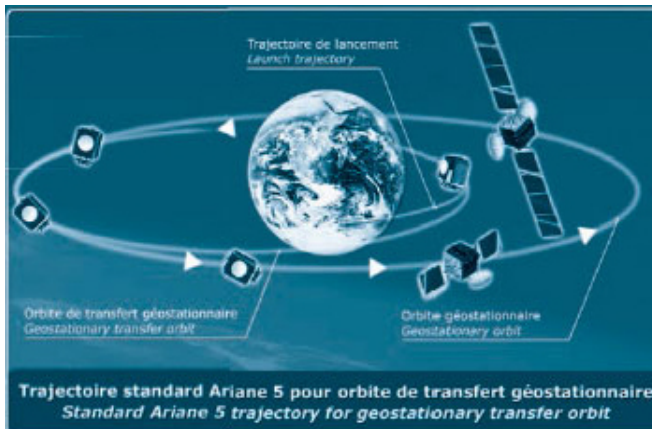
INVAP is the prime contractor for ARSAT S.A., which belongs to the Argentine Ministry of Federal Planning, Public Investment and Services and has the role to implement governmental policies in the areas of telecommunications. INVAP was charged with the design, the building, the integration and the testing of ARSAT-1.

The strategic decision to create the company ARSAT (2006) and the intelligent use of Government purchasing power by means of which the development of ARSAT -1 was entrusted to Argentine technicians, engineers and scientists, fall within the commitment of the Argentine Government to support the leading role played by science and technology in social and economic development of the country.



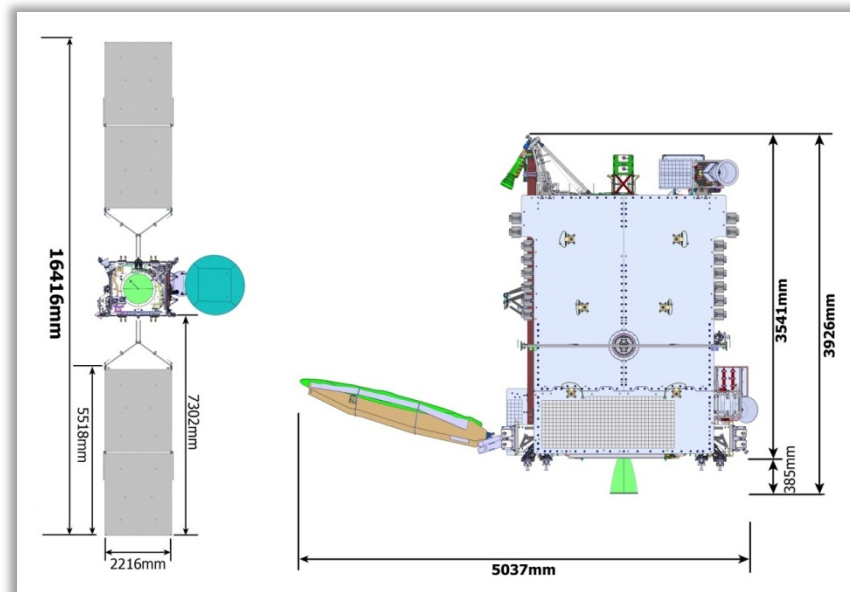
FEATURES OF ARSAT-1

ARSAT-1 is to cover one of the geostationary positions assigned to our country by the United Nations International Telecommunications Union, i.e.: 71,8° longitude West, 35,789km altitude, in an orbit around the Earth on the plane of the Equator.



The satellite weighs nearly 3 tons with its fuel tanks full and it measures 2m x 1.8m and is 3.95m high. In orbit, its solar panels unfolded, it will measure 16.40m from tip to tip, while its communications antenna is 2m in diameter.

The design of its track, or coverage area of ARSAT-1 concentrates maximum power over Argentina – including Antarctic Bases and Malvinas Islands – thus incorporating zones considered by private operators not financially attractive and therefore till now excluded from coverage. This is why the satellite ensures top quality connectivity to every region of Argentina, which falls within the country's commitment of inclusion, to reduce digital gap.





MADE IN ARGENTINA

ARSAT-1 is the first of its kind: a telecommunications satellite wholly designed, integrated and tested in Argentina. ARSAT-1 was specified by the Argentine telecommunications company ARSAT, which closely followed the progress of the project, scrutinizing the stages of design and building as well as testing both operational and environmental, whereby guaranteeing the ability of the satellite to operate in the assigned orbit. ARSAT is responsible for the insurance of the satellite, its transfer to the launch site, its positioning in orbit and its operation.

The design, building and integration of ARSAT-1, along with operational and environmental testing were carried out by INVAP. INVAP was selected for the job thanks to its extensive experience in Earth Observation Satellites. INVAP took the challenge head-on: to make a satellite that will orbit the Earth thirty six thousand km high, that must operate for over 15 years, with 99.9% availability to deliver communications services and 0.15° antenna aim precision.

The environmental testing – rendering excellent results – simulated the hostile conditions the satellite is to undergo during launch and in space, and was carried out in the facility High Technology Testing Center, a company created in 2010 resulting from an agreement between ARSAT and INVAP with the view to providing environmental testing services to Argentine satellite industry and other industries thus complementing productive processes and providing testing and measuring for quality control of complex technological systems.

QUALITY ASSURED

In April 2014, the insurance company Nación Seguros, backed by large international insurers, insured satellites ARSAT -1 and ARSAT-2. The insurance conditions offered to ARSAT for its satellites are highly favorable, substantially less expensive than insurance of other long-term new platforms for the duration of their useful life.

In order to obtain the backing of the international insurers, our satellites had to undergo intense auditing processes and procedure revisions, risk management and quality control, carried out under the scrutiny of international experts and state-of-the-art companies. Thus, besides the possibility of being able to quickly get under way replacement process in case of dire failure, the insurance in



itself is proof of maximum quality that is a feature of our satellites and of our design and production



processes. The results obtained show that ARSAT-1 and ARSAT-2 were considered to be reliable, on par with satellites made in countries of long-standing satellite technologies and as such, received insurance treatment on par with them.

In other words, Argentina has now joined a select group of countries, namely the USA, Russia, China, the Euro zone, Japan, Israel and India possessing geostationary satellite production capacity.

FINAL CHALLENGES

ARSAT -1 is to be launched by the vehicle Ariane 5 belonging to the company Arianespace on 16 October 2014 from Kourou, French Guyana. The launch pad is very close to the Equator so the inclination of the elliptic transference orbit is minimal: from 5° to 7° , and the weight in fuel saved to correct the inclination of the transference orbit results in added useful life of the satellite and/or a larger portion of the satellite given to communications equipment.



Arianespace is made up of the French National Center for Space Studies and of every European space company. Ariane 5 ECA (Evolution Cryotechnique type A) is a two-stage rocket able, on a single flight, to put two satellites into Geostationary Transference Orbit (GTO). The rocket is able to launch a total of 9.6 tons, or a single satellite weighing 10.5 tons. ARSAT -1 is to be launched together with Intelsat 30 belonging to the company INTELSAT. The total mass of the rocket at launch is some 775 tons.

A few minutes after take-off ARSAT -1 will be released into a transference orbit, 300km over the sea. This is the first Latin-American geostationary satellite to be put into orbit, and the ARSAT facility of Estación Terrena Benavídez is to be responsible for following, interpreting, and giving commands which will take the satellite to its position at 36,000km altitude at $71,8^{\circ}$ longitude West, where it will orbit on the equatorial plane, supplying our country with communications services.